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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/679,013

10/03/2003

Timothy J. Dupuis

SILA:040C2

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04/08/2008

O'KEEFE, EGAN, PETERMAN & ENDERS LLP
1101 CAPITAL OF TEXAS HIGHWAY SOUTH
#C200
AUSTIN, TX 78746

EXAMINER

MALEK, LEILA

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/679,013

Applicant(s)

DUPUIS ET AL.

Examiner

Leila Malek

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-111 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 60-111 is/are allowed.
- 6) ☒ Claim(s) 44,48-53 and 57-59 is/are rejected.
- 7) ☒ Claim(s) 45-47 and 54-56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/03/03,4/05/04,6/24/04,9/29/05,2/14/06,and 6/23/06.

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Information Disclosure Statement

2. The information disclosure statement filed on 06/24/2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract contains the form and legal phraseology often used in patent claims, such as "means". Appropriate action is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 44, 48-53, 57-59 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 7-12, 17-19 of U.S. Patent No. 7,046,755 in view of Hershberger (US 5,500,894). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Applicants in claims 44, 48-53, 57-59 of the instant application recite all the limitations of claims 1, 2, 7-12, 17-19 of the US 7,046,755, except that the DC holding circuit is operable in at least a first mode to meet a first phone line interface standard and a second mode to meet a second phone line interface standard, the second phone line interface standard having a DC current limit requirement. Hershberger discloses a DC holding circuit operable in at least a first mode to meet a first phone line interface standard and a second mode to meet a second phone line interface standard (see Figs. 2, 3, 7A. column 3, lines 41-56, column 4, lines 22-25, and column 12, lines 3-26). Hershberger does not expressly disclose that the second phone line interface standard having a DC current limit requirement. However, it is well known in the art that every standard has its own DC current limit requirement. It would have been obvious to one of ordinary skill in the art at the time of invention to have a DC holding circuit operable in a first mode to meet a first phone line interface standard and a second mode to meet a second phone line interface standard, in order to provide a telephone line interface compatible with differing standards (see column 1, lines 38-57). Furthermore, the instant application does not cite the limitation "the DC holding circuit having a first time constant in at least a first DC holding circuit phase of operation and having a second time constant in at least a second DC holding circuit phase of operation" as cited in claims 1 and 11 of the US 7,046,755. However, it would have been obvious to one of ordinary skill in the art at the time of invention to design a DC holding circuit without switchable time constants to reduce the complexity of the circuit.

Allowable Subject Matter

5. Claims 60-111 allowed. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 60 and 66, a comprehensive search of prior art of record failed to disclose, either alone or in combination, A method comprising: coupling an isolation barrier between powered side circuitry and phone line side circuitry, the isolation barrier comprising a plurality of isolation elements; configuring the powered side circuitry to communicate a first digital differential signal to at least two of the isolation barrier elements, the at least two isolation barrier elements comprising at least a first isolation capacitor and a second isolation capacitor; configuring the phone line side circuitry to communicate a second digital differential signal to the first isolation capacitor and the second isolation capacitor so that the first and second digital differential signals are communicated across the same first and second isolation capacitors and so that the first and second isolation capacitors bidirectionally transfer the first and second digital differential signals; configuring the powered side circuitry to provide a clock signal to the phone line side circuitry through at least one of the plurality of isolation elements; configuring the powered side circuitry and the phone line side circuitry so that power is capable of being provided from the phone line side circuitry to the phone line side circuitry while still maintaining the isolation required by the phone line isolation regulatory standards; forming a DC holding circuit within the phone line side circuitry, the DC holding circuit comprising a phone line side integrated circuit and external circuitry external to the integrated circuit; providing a programmable circuit for switching

the DC holding circuit between at least a first and second mode of operation, the first mode of operation for at least a first phone line interface standard and the second mode of operation for at least a second phone line interface standard, the second standard having a DC termination current limit; and coupling the internal circuitry and external circuitry so that if the DC holding circuit is operated in the second mode of operation more power may be dissipated in the external circuitry during the second mode of operation than during the first mode of operation.

As to claims 70 and 78, a comprehensive search of prior art of record failed to disclose, either alone or in combination, an apparatus comprising: phone line side circuitry capable of being coupled to phone lines; powered side circuitry capable of being coupled to the phone line side circuitry through an isolation barrier comprised of a plurality of isolation elements; a DC holding circuit within the phone line side circuitry for reducing power dissipation requirements of an integrated circuit within the communication system, the DC holding circuit comprising: at least one switchable circuit, the switchable circuit having a first state for a non-current limiting mode of operation and a second state for a current limiting mode of operation, external circuitry external to the integrated circuit, and internal circuitry within the integrated circuit, the external circuitry and the internal circuitry being coupled together wherein the external circuitry dissipates more power in the current limiting mode than in the non-current limiting mode; wherein the powered side circuitry is configured to communicate a first digital differential signal to at least two of the plurality of isolation elements, the at least two isolation elements comprising at least a first isolation capacitor and a second

isolation capacitor; wherein the phone line side circuitry is configured to communicate a second digital differential signal to the first isolation capacitor and the second isolation capacitor so that the first and second digital differential signals are communicated across the same first and second isolation capacitors and so that the first and second isolation capacitors bidirectionally transfer the first and second digital differential signals; wherein the powered side circuitry is further configured to provide a clock signal to the phone line side circuitry through at least one of the plurality of isolation elements; and wherein the powered side circuitry and the phone line side circuitry are configured so that power is capable of being provided from the powered side circuitry to the phone line side circuitry while still maintaining the isolation required by the phone line isolation regulatory standards.

As to claims 84 and 91, a comprehensive search of prior art of record failed to disclose, either alone or in combination, an apparatus comprising: phone line side circuitry capable of being coupled to phone lines; powered side circuitry capable of being coupled to the phone line side circuitry through an isolation barrier comprised of a plurality of isolation elements; a DC holding circuit compatible with a phone line standard having current limit requirements for reducing power dissipation requirements of an integrated circuit within the communication system, the DC holding circuit comprising: external circuitry external to the integrated circuit, and internal circuitry within the integrated circuit, the external circuitry and the internal circuitry being coupled together wherein the external circuitry dissipates more power than the internal circuitry in at least one mode of operation; wherein the powered side circuitry is configured to

communicate a first digital differential signal to at least two of the plurality of isolation elements, the at least two isolation elements comprising at least a first isolation capacitor and a second isolation capacitor; wherein the phone line side circuitry is configured to communicate a second digital differential signal to the first isolation capacitor and the second isolation capacitor so that the first and second digital differential signals are communicated across the same first and second isolation capacitors and so that the first and second isolation capacitors bidirectionally transfer the first and second digital differential signals; wherein the powered side circuitry of the communication system is further configured to provide a clock signal to the phone line side circuitry through at least one of the plurality of isolation elements; and wherein the powered side circuitry and the phone line side circuitry are configured so that power is capable of being provided from the powered side circuitry of the communication system to the phone line side circuitry while still maintaining the isolation required by the phone line isolation regulatory standards.

As to claims 96 and 101, a comprehensive search of prior art of record failed to disclose, either alone or in combination, a method comprising: coupling an isolation barrier between powered side circuitry and phone line side circuitry, the isolation barrier comprising a plurality of isolation elements; configuring the powered side circuitry to communicate a first digital differential signal to at least two of the isolation barrier elements, the at least two isolation barrier elements comprising at least a first isolation capacitor and a second isolation capacitor; configuring the phone line side circuitry to communicate a second digital differential signal to the first isolation capacitor and the

second isolation capacitor so that the first and second digital differential signals are communicated across the same first and second isolation capacitors and so that the first and second isolation capacitors bidirectionally transfer the first and second digital differential signals; configuring the powered side circuitry to provide a clock signal to the phone line side circuitry through at least one of the plurality of isolation elements; configuring the powered side circuitry and the phone line side circuitry so that power is capable of being provided from the phone line side circuitry to the phone line side circuitry while still maintaining the isolation required by the phone line isolation regulatory standards; forming a DC holding circuit within the phone line side circuitry, the DC holding circuit being formed with internal circuitry internal to an integrated circuit and external circuitry external to the integrated circuit, the DC holding circuit compatible with at least one phone line interface standard having a DC current limit requirement; and coupling the internal circuitry and external circuitry so that more power is capable of being dissipated in the external circuitry than in the internal circuitry.

As to claims 104 and 109, a comprehensive search of prior art of record failed to disclose, either alone or in combination, a method comprising: providing phone line side circuitry capable of being coupled to phone lines; providing powered side circuitry capable of being coupled to the phone line side circuitry through an isolation barrier comprised of a plurality of isolation elements; providing integrated circuitry and nonintegrated circuitry to comprise a DC holding circuit within the phone line side circuitry; coupling the integrated circuitry and the non-integrated circuitry; and dissipating more power in the external circuitry than in the internal circuitry if the DC

holding circuit is utilized for a phone line interface standard having a DC current limit requirement; wherein the powered side circuitry is configured to communicate a first digital differential signal to at least two of the plurality of isolation elements, the at least two isolation elements comprising at least a first isolation capacitor and a second isolation capacitor; wherein the phone line side circuitry is configured to communicate a second digital differential signal to the first isolation capacitor and the second isolation capacitor so that the first and second digital differential signals are communicated across the same first and second isolation capacitors and so that the first and second isolation capacitors bidirectionally transfer the first and second digital differential signals; wherein the powered side circuitry is further configured to provide a clock signal to the phone line side circuitry through at least one of the plurality of isolation elements; and wherein the powered side circuitry and the phone line side circuitry are configured so that power is capable of being provided from the powered side circuitry to the phone line side circuitry while still maintaining the isolation required by the phone line isolation regulatory standards.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leila Malek whose telephone number is 571-272-8731. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek
Examiner
Art Unit 2611

L.M.


MOHAMMED GRAYOUR
SUPERVISORY PATENT EXAMINER